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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

1. Examiner granted Applicants a post-final interview in which Examiner specifically made Applicants aware, again, that the arguments referring to ETFs and variations on ETFs as the source of the reason to find the invention non-obvious are not at all relevant to these claims concerning "a traded fund"; **any** traded fund.

Examiner quotes Applicants' specification as originally filed at page 12, top (bolding added):

"The invention provides systems and methods that allow trading of any fund while maintaining secrecy of the specific assets of the fund. While much of the following description is in terms of AMETFs**, the funds traded using the systems and methods of the invention can include (and the term "fund" as used herein includes at least the following): any type of investment instrument including, for example, shares of mutual funds, unit investment trusts (UITs), closed-end funds, grantor trusts, hedge funds, any investment company, or any other type of collective investment.** Furthermore, while the examples provided herein demonstrate intra- day trading of fund shares on a stock exchange without disclosure of fund assets, the **systems and methods of the invention are equally applicable to trading of secret-asset fund shares at any time on any venue,** market, or exchange, for example, after-hours trading on a U.S. or foreign exchange, or on an electronic trading network (ECN) or over-the-counter, third market, or other off-exchange trading venue".

2. Examiner does not agree with Applicants' description of the interview; Applicants' arguments regarding Dembo and Jameson were not persuasive. The article in Business Week and the NYT which Examiner cited does not show Mr. Gastineau discussing the claimed invention at all, as a detailed comparison of the wording of the **claims** with the articles will easily show, and the Business Week article also quotes BGI and James Branscome on page 2; clearly Mr. Gastineau was far from the only person recorded as thinking about the issue of the "NEW EXCHANGE FUNDS" of the title in November of 1999. Again, Examiner notes that the claims are about a "traded fund"; **ANY** traded fund, **not** an AMETF. Similarly, The NYT article does not describe the **claimed** invention at all, **also** cites Henry Hu, and Jim Novakoff, and says Mr. Gastineau declined to disclose the details of the "key feature of the AMEX **model**". The articles are proper references for what they are used for in the third (3rd.) alternative rejection of claim 56.

3. Regarding the section entitled "statement of the invention and second Baker declaration", Examiner finds interesting that Applicants begin by explaining that Applicants do not claim to have invented risk factor analysis and portfolio replication. Examiner requests a word-for-word comparison of what Applicants did not invent to the claim.

Applicants state that none of the cited prior art 'discloses or suggests the claimed combination of using risk factor analysis and portfolio modeling to create a proxy portfolio which may be used to estimate the value of a traded fund whose

holdings are not known to investors who trade shares of the traded fund". First, this is not a precise statement of what Applicants claimed. Second, it is an assertion without any facts. Thus it is not persuasive. Third, Examiner recalls, in the recent interview, summarizing by saying words to the effect of 'you are not denying that the limitations are taught, you are attacking the obvious-to-combine statement' and Mr. Stimson said "Exactly".

Then the following paragraph begins "The invention allows for the creation and trading of actively manages exchange traded funds without revealing the assets of a fund". This again is about something other than what is claimed, and is irrelevant. The subsequent paragraph is also referencing AMETFs, and is irrelevant to the claims, which are about a traded fund.

The following paragraph cites a " "traded fund" or an "exchange traded fund" both of which issue shares that are traded on a secondary market". Not in the claim either. Examiner gave a 35 U.S.C. §112 rejection on the final limitations which mention shares, addressing this point, to which the Applicants have not responded here. Examiner adds here that Applicants' specification as cited above allows of many interpretations of "fund", including, for example, "**any other type of collective investment"**.

Examiner again reminds Applicants that they themselves use the term "portfolio" to refer to their invention, as cited in the prior Office Action. The distinction they are making is not borne out even by their own specification. Furthermore, that portfolios cannot be traded is simply not true. The issue of a secondary market is hardly important; anything which is re-sold is on a

secondary market, e.g. a private sale of a stick of gum from a bought pack of gum is done “on a secondary market”.

Applicants' prior "evidence" submitted was amply and carefully rebutted in the prior final Office Action, pages 6-12, as best as possible given the mishmash of multiple amendments and sets of arguments Examiner was asked to consider simultaneously.

Applicants’ arguments have been fully considered here or in the prior Final Office Action, and found not persuasive.

4. Regarding the section entitled “secondary considerations of non-obviousness”, the evidence largely regarding an entirely different type of fund from the ones claimed in the instant Application is more than obviously not clearly relevant, but Examiner has provided references which teach the claims and which are over a decade or two decades old. The formation of a proxy fund by using risk factors and without revealing the assets of the target, to the extent possible (and Examiner again draws attention to her example in the prior Office Action, to which Applicants have not responded, where one and only one asset of every asset available moves, the presence in both portfolios could not be missed and thus the proxy reveals the target, so a proxy that does not **ever** reveal the target cannot be realized). Examiner granted Applicants a post-final interview in which Examiner specifically made Applicants aware, again, that the arguments referring to ETFs and variations on ETFs as the source of the reason to find the invention non-obvious are not at all relevant to these claims concerning “a traded fund”; **any** traded fund.

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Week article also quotes BGI and James Branscome on page 2; clearly Mr. Gastineau was far from the only person recorded as thinking about the issue of the "NEW EXCHANGE FUNDS" of the title in November of 1999. Again, Examiner notes that the claims are about a "traded fund"; **ANY** traded fund, **not** an AMETF. Similarly, The NYT article does not describe the **claimed** invention at all, **also** cites Henry Hu, and Jim Novakoff, and says Mr. Gastineau declined to disclose the details of the "key feature of the AMEX **model**". The articles are proper references for what they are used for in the third (3rd.) alternative rejection of claim 56.

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Then the following paragraph goes off into "The invention allows for the creation and trading of actively manages exchange traded funds without

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The following paragraph cites a “traded fund" or an "exchange traded fund" both of which issue shares that are traded on a secondary market”. Not in the claim either. Examiner gave a 35 U.S.C. §112 rejection on the final limitations which mention shares, addressing this point, to which the Applicants have not responded here. Examiner adds here that Applicants’ specification as cited above allows of many interpretations of “fund”, including “**any other type of collective investment”**. Thus the existence of shares and certainly of traded shares are not necessarily implied by the mention of "traded fund" or "exchange traded fund", as Applicants appear to wish to argue.

Examiner again reminds Applicants that they themselves use the term “portfolio” to refer to their invention, as cited in the prior Office Action. The distinction they are making is not borne out even by their own specification. Furthermore, that portfolios cannot be traded is simply not true. The issue of a secondary market is hardly important; anything which is re-sold is on a secondary market, e.g. a private sale of a stick of gum from a bought pack of gum is done “on a secondary market”.

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In fact, any proxy portfolio having an undefined "**substantially the same**

sensitivity coefficients as the traded fund" can be used to estimate the value of the target, inasmuch as the claim does not say anything specific about the quality of the estimate at all; for example the sensitivity coefficients could easily be normalized such that the two could have even precisely the same sensitivity coefficients but the value of one fund is N times the value of the other and the "estimated value" of the target would be way off; further, simply choosing sensitivity coefficients, as the Kat and Palaro article Examiner supplied points out, is not really specifying a useful procedure because data shows that the choice of appropriate risk factors is difficult. Regarding the system and methods Applicants claim, when the traded fund is a hedge fund, one of Applicants' possible interpretations, *per* their specification, of a "fund", Kat and Palaro also discuss performance models and the "reserve asset', and reference the detailed methods "the derivation of the strategy and its workings are too complex to discuss here" but obviously not beyond a good academic's reach; one familiar with applied mathematics and econometrics. The procedure claimed is a very old and well-known process, and the calculation of a fund's value is old and well-known, where if the fund is designed to match risk factors, its value can be used to estimate the target.

Examiner gave an indication, in item 36 of the final Office Action, of but some of the names of the many, many people who have written papers concerning using factor analysis to create a proxy portfolio that could be used to estimate the value of (or hedge) an unknown fund. The history of this topic is rich and the papers are many; Applicants' apparent allegation that what was

claimed is unknown is simply wrong. Examiner did not cite Shorack & Wellner 1986, "Empirical Processes with Applications to Statistics", a Wiley statistics text which covers much of the basics underlying the methods to which the claim alludes but does not in fact describe in enough detail to perform the method (how do you choose the risk factors, the sensitivity coefficients, the securities, over what period do the sensitivities match the target, and how closely,…etc.).
Now as to the secondary references cited, Applicants once again describe a market need for AMETFs or (25) actively managed ETFs. AMETFs and actively managed ETFs are **not the same** as the **very** general "traded fund" of the claim. Mr. Baker's declaration is about a very small subset of traded funds and **is not relevant** to claims written to cover all traded funds or all exchange traded funds. Thus Applicants are once again presenting "evidence" which does not remotely prove that the invention **claimed** would not have been obvious. Applicants' arguments have been considered but are not persuasive.

5. Regarding the section entitled "Examiner's response to arguments", Applicants pick out just one to address, over one of the three rejections of claim 56, apparently. The application as filed refers to the proxy as a portfolio, as Examiner has shown multiple times. The portfolio can be traded. Nowhere in the claims Examiner looked at did it say precisely how the proxy was traded. Claim 56 refers to weights and securities in the proxy portfolio and then to trading shares of the traded fund, which is the **target.** As best Examiner can understand Applicants' argument, they are confusing the target whose sensitivity coefficients

the proxy's sensitivity coefficients “substantially’ match with the proxy itself. Applicants’ argument makes no sense. Applicants’ arguments have been considered but are not persuasive.

6. Regarding the section entitled “First Baker Declaration”, the ETFS Mr. Baker discusses are **not the same** as the **very** general “traded fund” of the claim. Mr. Baker’s declaration is about a very small subset of traded funds and **is not relevant** to claims written to cover all traded funds or all exchange traded funds. Applicants’ arguments have been considered but are not persuasive.

7. Regarding the section entitled “Rejections under 35 U.S.C. §112, first paragraph-written description”, Examiner does not see why Applicants believe a statement about **intraday market trading of AMFs**, applies to a much broader claim about “identities of the traded fund assets (are) not disclosed to an investor who trades shares of the traded fund”, or why a statement about not knowing the **composition of a set of securities** says anything precise about not knowing the identities of traded fund assets. Nor do Applicants address the rejections about the confusion caused by preambles and bodies of the claim: “Applicants are making multiple **unclear** distinctions between public and investor who trades, between not disclosing, not disclosing daily, and not disclosing at all”. Applicants have not clarified. Applicants’ arguments have been considered but are not persuasive.

8. Regarding the section entitled “Rejections under 35 U.S.C. §112, first paragraph-enablement”. Examiner does concede that the claim (e.g. claim56) only requires that sensitivity coefficients be “substantially the same”. However, there is no information on how the risk factors or sensitivity coefficients are produced, how the securities in the proxy are selected, how the proxy portfolio having the “substantially same” sensitivity coefficients is produced—nor, as Examiner has observed in multiple Office Actions, what “substantially the same” means. “Using a computer to create a proxy portfolio” can be interpreted as “a person typed the proxy portfolio into the computer”.

Concerning secrecy, Examiner says absolutely nothing at all about 10 investments; one wonders where this fabrication came from. Applicants’ argument does not address what Examiner wrote.

9. Regarding the section entitled “Rejections under 35 U.S.C. §112, second paragraph-indefiniteness”, Examiner thanks Applicants for making the small changes to clarify antecedents.

Concerning “substantially the same”, Examiner disagrees. First, limitations may not be imported from the specification. Second, Applicants again confuse the target with the proxy, and yet again argue limitations nowhere in the claims at all. There is absolutely no trading actually occurring in claim 56, 57, 59, 95, or 97.

.Concerning shares of the fund, yes, some funds have shares; some portfolios include a weighted sum of shares; funds can be portfolios; the particular fund of the claims have not been specified in the claims as either

having a share structure (i.e. issuing shares) or as being made of a 'collection" of shares (e.g. 100 shares of IBM, 200 of Cisco, etc.) which may well be said to be shares of the fund which are traded. Applicants have not clarified in the claims which is the case here, and an argument that "some funds have shares" clearly does not clarify a claim covering a "traded fund" in general.

Applicants' arguments have been considered but are not persuasive.

10. Regarding the section entitled "Rejections under 35 U.S.C. §101-stautory subject matter", Applicants argue that a fund is a manufacture. The SEC requires most traded funds to file disclosures concerning the terms of funds; these mechanisms clearly would not be required for a manufactured article. The claim is also not tied to a machine, per the requirements (please review http://www.uspto.gov/web/offices/pac/dapp/opla/2009-08-25_interim_101_instructions.pdf). Claim 56 only cites in the body no significant steps performed by an apparatus; the "using a computer to create a proxy portfolio" could describe a person typing it into the computer.

Applicants' arguments have been considered but are not persuasive.

11. Regarding the section entitled "Rejections under 35 U.S.C. §102-anticipation", Applicants are arguing a distinction not borne out by their use in the specification of "portfolio" to describe their invention, as Examiner has cited

numerous times (see item 15 of the prior Office Action, citing from Applicants;' specification : 'e.g. :" risk exposure calculation may be based on a function of the pricing data for the AMETF portfolio" and the "methods shown in Figures 1 and 2 provide measures of intra-day values throughout the trading day without public without public disclosure of the underlying portfolio"', or by the claim language, which as explained under item 9 above, does not at all clearly limit the interpretation to the one chosen by Applicants in this argument The remaining arguments have been answered by Examiner in the prior Office Action. Please review Dembo and the documents explicitly incorporated in Dembo, and at least item 15 of the final Office Action.

Applicants' arguments have been considered but are not persuasive.

12. Regarding the section entitled "Rejections under 35 U.S.C. §103-obviousness", but dealing with only one of the two of these, Applicants appear to rely on the preamble, which here is not accorded patentable weight. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Applicants allege that Connor does not disclose a traded fund. Examiner reminds Applicants that the rejection is a 103

rejection the references are used for what they suggest to one of skill in the art as a whole. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Once again, Examiner points to items 9 above and 15 of the prior Office Action regarding interpretable manner Applicants use “fund”, “portfolio”, and “trad[ing] shares of the traded fund”. In addition, review for example page 13 , second paragraph, page 16 bottom two-thirds, to assure one that a fund as described in Applicants’ specification, and a traded portfolio of assets, or traded fund, is certainly meant. The objection to Jameson ignores the full argument extending to page 32 of the prior Office Action, which answers the objection. The objection to Dembo ignores the quotes at page 33 of the prior Office Action, which answers the objection. Dembo has a short introduction to hedging at column 54 lines 32-52 may help Applicants understand why Dembo does teach a proxy **tracking** any attribute and **replicating** the target portfolio, and thus yielding a proxy which tells one the price of the target, and is designed for that purpose. Applicants do not respond to Examiner’s citation of their own specification at pages 21-22 indicating that much of the claim is old and well-known. Applicants’ arguments have been considered but are not persuasive.

13. Third alternative rejection of claim 56: “Sharpe, Business Week, and New

York Times". Applicants again try to attack the 103 rejection by arguments against the references individually; one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The arguments made are not germane to what is claimed in claim 56, as has been expressed numerous times. Applicants' arguments have been considered but are not persuasive.

14. Regarding the section entitled "remaining claims", once again, Applicants incorrectly argue against the references individually; one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). One of skill in the art would not assume that " the market portfolio must include every valuable asset in the worlds" as Applicant assume; a reading of their own reference Connor et al (reference C2 on 4/3/06 IDS) at pages 16-23 has a discussion of a variety of assumptions used in different situations regarding market portfolios; one of them, "well-diversified", is hardly the same as "must include every valuable asset in the worlds" (sic); indeed, on the practical side, Examiner's beginning finance class taught that excellent diversification for an investor can be obtained by holding but 40 stocks.

Applicants apparently also mis-read Gibbons. Gibbons cites "tests of asset pricing models are developed which do not require identification of the market portfolio or state variables" and clarifies that in the Sharpe-Lintner version of CAPM (only one version) "return on the market portfolio **of risky assets** is not **necessarily** available; and proceeds to show that a subset of available information can still provide a powerful test of CAPM, and continues that the statistical model need only apply to the assets under study, not to entire population of assets or the market portfolio (note: OR—i.e. the entire market population is not the same as the market portfolio). The elements of Z_{t-1} may be correlated with but are not necessarily equivalent to the state variables in a dynamic asset pricing model. Section 3 then extends the tests to asset pricing models formed of returns on hedge portfolios not necessarily observable by the econometrician. Hedge funds of assets not known to any but the managers were well-known to those of skill in the art at the time of the invention, and the assets held by such hedge portfolios are typically not disclosed. Gibbons is clear on (and used for) how to extend Sharpe's well-known analysis method to calculate weights to create a proxy portfolio, when the target portfolio is not known. Again, what the combined references named suggests to one of skill in the art is what the 103 rejection is based upon.

Official Notice was used for disseminating a value. To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the Examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. See 37

CFR1.111(b). Applicants have not traversed properly. The value was calculated in claim 56; claim 57 merely disseminates the value. For completeness, Examiner notes that any number of values are disseminated in numerous markets during the day. Typically, a fund may distribute indicative NAV, for example, and adds a statement that it is estimated and that the Company accepts no responsibility for the accuracy of the indicative value given. It is an estimate, and may be corrected (see Highbeam article appended, The Pakistan Investment Fund, Inc. Corrects Its Net Asset Value). Further, such a NAV is also an estimate because it is frequently intrinsically different from the market price (see Highbeam article 2 appended, Definition, Net Asset Value, from A Dictionary Of Accounting, Hussey, R.). Again, a 103 rejection is involved, a combination.

Applicants' arguments have been considered but are not persuasive.

15. Since all the arguments have been answred before or new arguments are not persuausive, the finality of the prior Office Action is maintained.

/LINDA PERRY/

Linda Perry

Examiner, Art Unit 3695

08 Ocotober 2009.

/Charles R. Kyle/
Supervisory Patent Examiner, Art Unit 3695